

IN THE CLAIMS:

Please amend the claims as follows.

Claims 1-4 (Canceled).

Claim 5 (Currently Amended): An information record medium readable by an information reproducing apparatus, the information record medium ~~comprising~~ including a first recording layer on which a data group is recorded; and a second recording layer on which a data group is recorded, wherein on the first recording layer, a lead-in area, management information for the whole of recording information, and the data group are recorded; on the second recording layer, a lead-out area and a data group are recorded; the lead-in area is recorded at the inner radius side of the information record medium; and the lead-out area is recorded at the inner radius side of the information record medium, ~~wherein the~~ information record medium further comprising ~~comprises~~:

a mid area at the outer radius side of the first recording layer; and

~~the other~~ another mid area at the outer radius side of the second recording layer.

Claim 6 (Canceled).

Claim 7 (Previously Presented): The information record medium according to claim 5, wherein the first recording layer comprises the lead-in area, the management information, the data group, and the mid area in that order from the inner radius side of the first recording layer.

Claim 8 (Previously Presented): The information record medium according to claim 5, wherein the second recording layer comprises the mid area, the data group, and the lead-out area in that order from the outer radius side of the second recording layer.

Claim 9 (Previously Presented): The information record medium according to claim 5, wherein the data group comprises: control data; and at least either video information or audio information.

Claim 10 (Currently Amended): A recording apparatus comprising: a signal processing device which generates additional information including a data group and management information for the whole of recording information; and a recording device which records a lead-in area, the management information, and a data group on a first recording layer of an information record medium and records a lead-out area and a data group on a second recording layer of the information record medium,

wherein the recording device records the lead-in area at the inner radius side of the information record medium, and records the lead-out area at the inner radius side of the information record medium,

wherein the recording device records a mid area at the outer radius side of the first recording layer, and records ~~the other~~ another mid area at the outer radius side of the second recording layer.

Claim 11 (Canceled).

Claim 12 (Previously Presented): The recording apparatus according to claim 10, wherein the first recording layer comprises the lead-in area, the management information, the data group, and the mid area in that order from the inner radius side of the first recording layer.

Claim 13 (Previously Presented): The recording apparatus according to claim 10, wherein the second recording layer comprises the mid area, the data group, and the lead-out area in that order from the outer radius side of the second recording layer.

Claim 14 (Previously Presented): The recording apparatus according to claim 10, wherein the data group comprises: control data; and at least either video information or audio information.

Claim 15 (Currently Amended): A recording method comprising: a signal processing process for generating additional information including a data group and management information for the whole of recording information; and a recording process for recording a lead-in area, the management information, and a data group on a first recording layer of an information record medium and for recording a lead-out area and a data group on a second recording layer of the information record medium,

wherein the recording process records the lead-in area at the inner radius side of the information record medium, and records the lead-out area at the inner radius side of the information record medium,

wherein the recording process records a mid area at the outer radius side of the first recording layer, and records ~~the other~~ another mid area at the outer radius side of the second recording layer.

Claim 16 (Canceled).

Claim 17 (Previously Presented): The recording method according to claim 15, wherein the first recording layer comprises the lead-in area, the management information, the data group, and the mid area in that order from the inner radius side of the first recording layer.

Claim 18 (Previously Presented): The recording method according to claim 15, wherein the second recording layer comprises the mid area, the data group, and the lead-out area in that order from the outer radius side of the second recording layer.

Claim 19 (Previously Presented): The recording method according to claim 15, wherein the data group comprises: control data; and at least either video information or audio information.

Claim 20 (Previously Presented): The information record medium according to claim 5, wherein said data group comprises control data and substantive information, said substantive information comprising a plurality of cells, said control data comprising information relating to a program chain which is a logical unit comprising a combination of a plurality of programs, said programs comprising a combination of said cells, said cell comprising a plurality of video object units, said video object units comprising at least one of a navigation pack, a video pack, an audio pack, and a sub picture pack, said navigation pack comprising a packet of search information and a packet relating to display control, said video packet comprising a video packet, said audio packet comprising an audio packet, and said sub picture pack comprising a sub picture packet.

Claim 21 (Previously Presented): The recording apparatus according to claim 10, wherein said data group comprises control data and substantive information, said substantive information comprising a plurality of cells, said control data comprising information relating to a program chain which is a logical unit comprising a combination of a plurality of programs, said programs comprising a combination of said cells, said cell comprising a plurality of video object units,

said video object units comprising at least one of a navigation pack, a video pack, an audio pack, and a sub picture pack,

said navigation pack comprising a packet of search information and a packet relating to display control,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 22 (Previously Presented): The recording method according to claim 15, wherein said data group comprises control data and substantive information, said substantive information comprising a plurality of cells, said control data comprising information relating to a program chain which is a logical unit comprising a combination of a plurality of programs, said programs comprising a combination of said cells,

said cell comprising a plurality of video object units,

said video object units comprising at least one of a navigation pack, a video pack, an audio pack, and a sub picture pack,

said navigation pack comprising a packet of search information and a packet relating to display control,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 23 (Currently Amended): An information record medium readable by an information reproducing apparatus, the information record medium ~~comprising~~ including a first recording layer on which a data group is recorded; and a second recording layer on which a data group is recorded, ~~wherein~~ the information record medium further comprising:

on the first recording layer, a lead-in area, the data group and a mid area ~~are~~ recorded in a direction from the inner radius side of the information record medium to the outer radius side of the information record medium; and

on the second recording layer, a lead-out area, a mid area and a data group ~~are~~ recorded in a direction from the inner radius side of the information record medium to the outer radius side of the information record medium.

Claim 24 (Previously Presented): The information record medium according to claim 23, wherein said data group comprises control data and substantive information,

said substantive information comprising a plurality of video object units,

said control data comprising information relating to a program which is a logical unit comprising a combination of a plurality of video object units,

said video object units comprising at least one of a video pack, an audio pack, and a sub picture pack,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 25 (Currently Amended): A recording apparatus comprising: a signal processing device which generates additional information including a data group; and a recording device which records a lead-in area, and a data group on a first recording layer of an information record medium and records a lead-out area and a data group on a second recording layer of the information record medium,

wherein the recording device records the lead-in area at the inner radius side of the information record medium, and records the lead-out area at the inner radius side of the information record medium,

wherein the recording device records a mid area at the outer radius side of the first recording layer, and records ~~the other~~ another mid area at the outer radius side of the second recording layer.

Claim 26 (Previously Presented): The recording apparatus according to claim 25, wherein said data group comprises control data and substantive information,

said substantive information comprising a plurality of video object units,

said control data comprising information relating to a program which is a logical unit comprising a combination of a plurality of video object units,

said video object units comprising at least one of a video pack, an audio pack, and a sub picture pack,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.

Claim 27 (Currently Amended): A recording method comprising: a signal processing process for generating additional information including a data group; and a recording process for recording a lead-in area, and a data group on a first recording layer of an information record medium and for recording a lead-out area and a data group on a second recording layer of the information record medium,

wherein the recording process records the lead-in area at the inner radius side of the information record medium, and records the lead-out area at the inner radius side of the information record medium,

wherein the recording process records a mid area at the outer radius side of the first recording layer, and records ~~the other~~ another mid area at the outer radius side of the second recording layer.

Claim 28 (Previously Presented): The recording method according to claim 27, wherein said data group comprises control data and substantive information,

said substantive information comprising a plurality of video object units,

said control data comprising information relating to a program which is a logical unit comprising a combination of a plurality of video object units,

said video object units comprising at least one of a video pack, an audio pack, and a sub picture pack,

said video packet comprising a video packet,

said audio packet comprising an audio packet, and

said sub picture pack comprising a sub picture packet.